

Space Data Corporation

Air-To-Ground Proceeding

WT Docket No. 03-103

Presented To The FCC's
Wireless Telecommunications Bureau And
Office Of Engineering And Technology

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Exclusive Two-License Approach For ATG Spectrum Is Realistic And Feasible

- 2.5 MHz license can support CDMA technology.
- 1.5 MHz license can support a variety of technologies to provide multiple services, including voice, Internet access, and SMS.
- 1.5 MHz licensee can effectively compete for ATG services.

Advantages Of A Two-Exclusive License Approach For ATG Spectrum

- Promotes competition in the ATG market.
- Flexibility for licensees to scale networks in response to market demand.
- Technologically neutral / not locked in to specific technologies, protocols, or pace of development.
- Administratively and technologically simple to implement.
- Avoids complex interference and sharing requirements and potential restrictions on future expansion or upgrades to networks.

Implementation Of Overlapping Licenses Difficult To Implement

- Requires significant technical coordination between licensees, limiting flexibility. Ongoing coordination will make it difficult for licensees to react to changes in market demands or new technological developments.
- Requires the FCC to promulgate detailed base station location, sharing, and interference requirements. Requirements become even more complicated if each licensee uses different technologies and protocols.

Combinatorial Bidding Offers Viable Market-Based Compromise

- The ATG auction can be designed so that bidders determine whether exclusive or overlapping licenses are assigned.
- Bidding will determine the best use for the four MHz of ATG spectrum.
- The ATG spectrum can be divided into four auctionable frequency blocks, which can be combined.
- Cross-ownership restrictions would prevent monopoly in ATG band.

Proposed Bidding Package

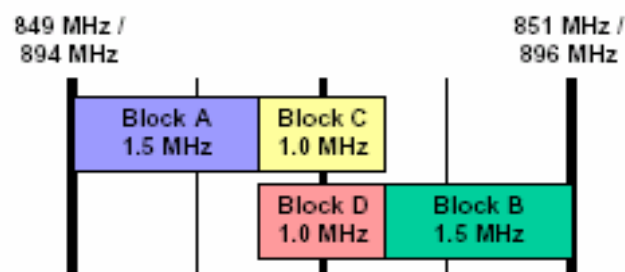
Proposed scheme with package bidding:

A Block: exclusive use 1.5 MHz

B Block: exclusive use 1.5 MHz perhaps with an initial period of sharing with the legacy ATG network

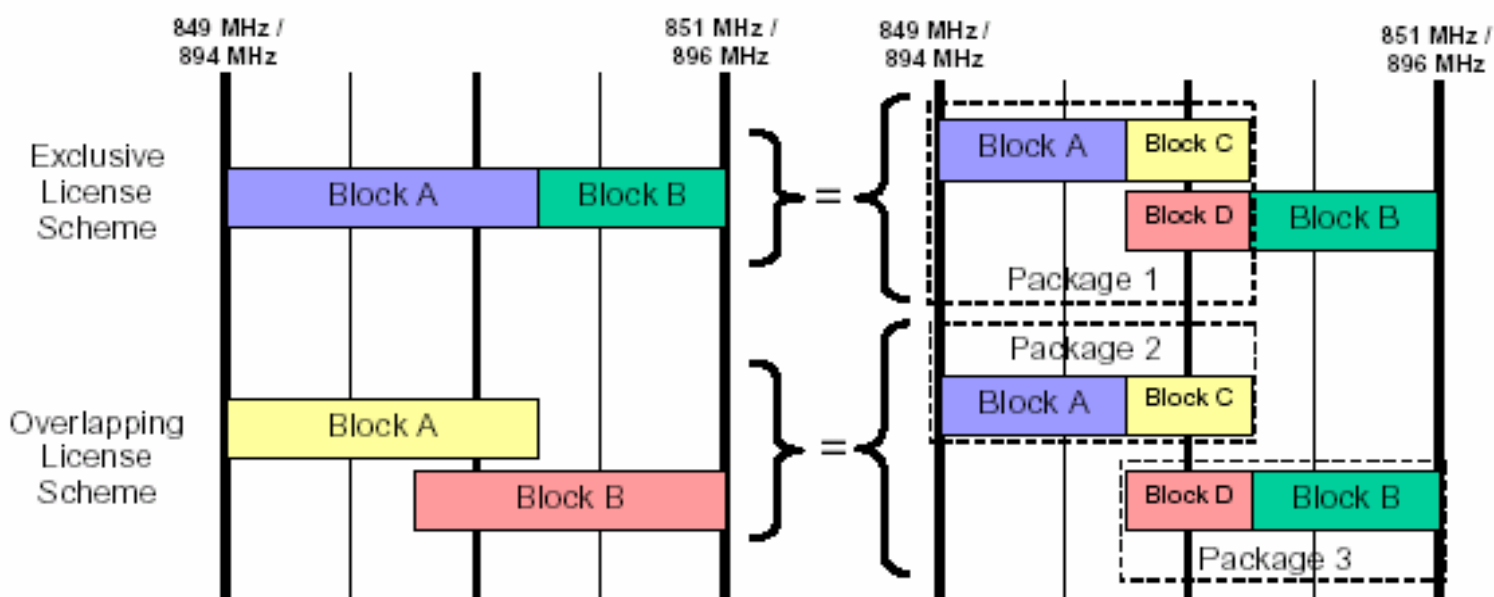
C Block: shared use of 1.0 MHz

D Block: shared use of 1.0 MHz



Current Licensing Schemes Being Considered

Equivalent Schemes With Package Bidding



Possible Licensing Scenarios Under Combinatorial Bidding

- A licensee interested in an exclusive 2.5 MHz license would bid on the A, C and D Blocks. The second winning bidder would have an exclusive 1.5 MHz license.
- A licensee interested in overlapping 2.5 MHz licenses would bid on the A and C Block or the B and D Block.

Three-Block Bidding Alternative

- In the alternative, the ATG spectrum could be divided into three exclusive blocks (A, B and C Blocks, each 1.33 MHz). A licensee interested in an exclusive 2.66 MHz license would bid on the A and B Blocks. The second winning bidder would have an exclusive 1.33 MHz license.
- The 1.33 MHz license can support narrowband technologies such as iDEN, to provide voice, Internet access and SMS.
- Allows some guard band spectrum for CDMA in a 2.66 MHz license.